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# Fax

Date	1-3-2006		
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Re:	SN 10/693,531		

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## Message

Applicant: R Garth Pews  
Serial No: 10/693,531  
Filed: 10/24/2003  
For: Novel Diepoxide Derivatives of Diallylphenols  
Group Art Unit: 1626 Examiner: Ebenezer O Sackey

Attached response to Office Action dated 12-19-2005.

Bernard W. Sandt

## IN THE UNITED STATES PATENT &amp; TRADEMARK OFFICE

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Applicant: R Garth Pews

Serial No: 10/693,531

Filed: 10/24/2003

For: Novel Diepoxide Derivatives of Diallylphenols

Group Art Unit: 1626

Examiner: Ebenezer O Sackey

By Facsimile

Hon. Commissioner for Patents

Response A

Sir:

In response to the Office Action dated 12-19-2005, please amend the subject application as follows:

Add claim 20 as set forth in the attached sheet.

Applicant respectfully traverses the restriction requirement set forth in the action of 12-19-2005. It should be apparent that the principal moiety in the claimed diepoxides is the diepoxidized form of diallyl phenols and that the claimed compounds only differ in a single ether or ester substituent on the diallyl phenol moiety. All of the compounds claimed are examinable in the same subgroup be it either subgroup 217 or 512 which are both related to ethers and esters of epoxides. The examiner's reasoning is not correct. If solely a formula difference is the criterion, then bromides and chlorides could not be claimed in the same application. Obviously that is not the case. It is not apparent why the examiner would have to search a commercial database or why such should be burdensome. No support for such allegations has been demonstrated.

BWS 03-06

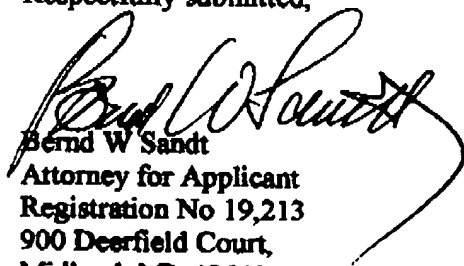
- 1 -

The examiner argues that the species claimed by applicant in claim 1 have acquired a separate status by their different classification. However even the examiner admits that three of the species of the diepoxides claimed are in one identical subgroup and the other three are in another identical subgroup and thus the argument is unsupported. Furthermore review of the definitions of the subgroups will demonstrate that both are directed to the epoxides of all six species claimed by applicant. Thus there is no difference in the subclasses. In effect therefore the compounds of all six formulas are in the same subclass.

The examiner's attention is further directed to such patents as US 6,567,047 a copy of claim 1 of which is attached hereto which demonstrates that diepoxides having substituents as set forth in the various formulas of claim 1 are nevertheless considered to be the same invention, which as here, is directed to the diepoxide structure. This further demonstrates that the restriction requirement is unjustified.

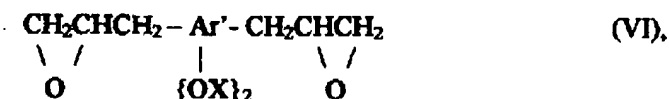
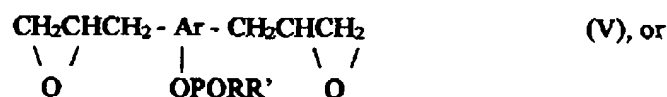
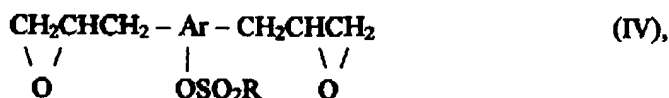
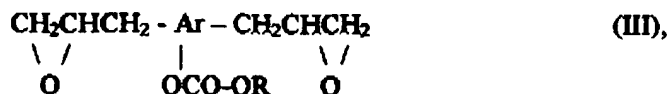
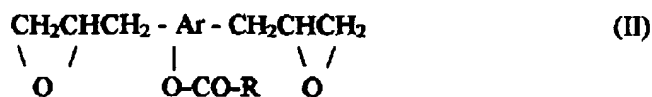
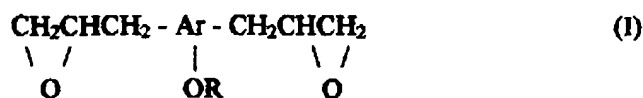
In view of the mandatory nature of the requirement applicant provisionally elects the compounds of formula 1, which are in addition to being part of claims 1, 2, 7 and 8-13, are also included in newly added claim 20. However applicant nevertheless requests that in the light of the foregoing arguments the restriction requirement be withdrawn.

Respectfully submitted,



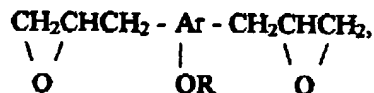
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## 1. (Original) Diepoxide esters and ethers having the formulas:



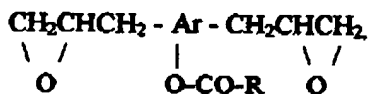
where Ar is a trivalent aromatic radical of 6-20 carbon atoms, Ar' is a bridged diaromatic radical having the formula Ar-Y-Ar and Y is O, CO, S, SO<sub>2</sub>, -(CH<sub>2</sub>)<sub>y</sub>, or -C(R'')<sub>2</sub> and y is from 0 to 6, and R and R' are the same or different alkyl, alkylene aryl, aryl, arylene alkyl, alkylene alkoxy, alkylene aryloxy, arylene alkoxy and arylene aryloxy radical having from 6-20 carbon atoms and X is -R, -COR, -COOR, -SO<sub>2</sub>R, or-PORR'.

## 2. (Original) The diepoxide ethers of claim 1 having the formula



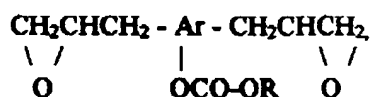
where Ar is a trivalent aromatic radical of 6-20 carbon atoms and R is an alkyl, alkylene aryl, aryl, arylene alkyl, alkylene alkoxy, alkylene aryloxy, arylene alkoxy and arylene aryloxy radical having from 6-20 carbon atoms.

## 3. (Original) The diepoxide carboxylic acid esters of claim 1 having the formula



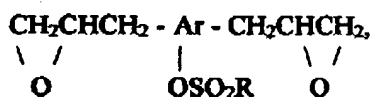
where Ar is a trivalent aromatic radical of 6-20 carbon atoms and R is an alkyl, alkylene aryl, aryl, arylene alkyl, alkylene alkoxy, alkylene aryloxy, arylene alkoxy and arylene aryloxy radical having from radical of 6-20 carbon atoms.

4. (Original) The diepoxide carbonic acid esters of claim 1 having the formula



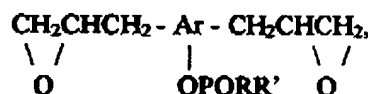
where Ar is a trivalent aromatic radical of 6-20 carbon atoms and R is an alkyl, alkyl aryl, aryl, aryl alkyl, alkylene alkoxy, alkylene aryloxy, arylene alkoxy and arylene aryloxy radical having from 6-20 carbon atoms.

5. (Original) The diepoxide sulfonic acid esters of claim 1 having the formula



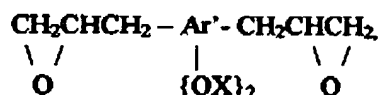
where Ar is a trivalent aromatic radical of 6-20 carbon atoms and R is an alkyl, alkylene aryl, aryl, arylene alkyl, alkylene alkoxy, alkylene aryloxy, arylene alkoxy or arylene aryloxy radical having from 6-20 carbon atoms.

6. (Original) The diepoxide phosphorus esters of claim 1 having the formula



where Ar is a trivalent aromatic carbon radical of 6-20 carbon atoms and R and R' are alkyl, alkylene aryl, aryl, arylene alkyl, alkylene alkoxy, alkylene aryloxy, arylene alkoxy and arylene aryloxy radicals having from 6-20 carbon atoms.

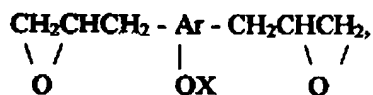
7. (Original) The diepoxide esters of claim 1 having the formula



where Ar' is a bridged diaromatic radical having the formula Ar-Y-Ar and Y is O, CO, S, SO<sub>2</sub>, -(CH<sub>2</sub>)<sub>y</sub>, or -C(R'')<sub>2</sub> and y is from 0 to 6, Ar is a trivalent aromatic radical of 6-20 carbon atoms, and R and R' are the same or different alkyl, alkylene aryl, aryl, arylene alkyl, alkylene alkoxy, alkylene aryloxy, arylene alkoxy and arylene aryloxy radical having from 6-20 carbon atoms and X is -R, -COR, -COOR, -SO<sub>2</sub>R, or -PORR'.

8. (Original) The diepoxide of claim 2 where the ether is 2,6-di-(2,3-epoxypropyl)phenyl methyl ether.

9. (Original) The diepoxide of claim 2 where the ether is 2,6-di-(2,3-epoxypropyl)phenyl ethyl ether.
10. (Original) The diepoxide of claim 2 where the ether is 4-methyl-2,6-di-(2,3-epoxypropyl)phenyl methyl ether.
11. (Original) The diepoxide of claim 2 where the ether is 2,6-di(2,3-epoxypropyl)phenyl benzyl ether.
12. (Original) The diepoxide of claim 2 where the ether is 2,6-di(2,3-epoxypropyl)phenyl-4-cyano phenyl ether.
13. (Original) The diepoxide of claim 2 where the ether is 2,6-di(2,3-epoxypropyl)phenyl octadecyl ether.
14. (Original) The diepoxide of claim 3 where the ester is 4-toluic acid: 2,6-di(2,3-epoxypropyl)phenyl ester.
15. (Original) The diepoxide of claim 4 where the ester is 2,6-di(2,3-epoxypropyl)phenyl methyl carbonate.
16. (Original) The diepoxide of claim 5 where the ester is 4-toluenesulfonic acid: 2,6-di(2,3-epoxypropyl)phenyl ester.
17. (Original) The diepoxide of claim 6 where the ester is 2,6-di(2,3-epoxypropyl)phenyl diethyl phosphate.
18. (Original) The diepoxide of claim 7 where the diether is 2,2-{3-(2,3-epoxypropyl)-4-methoxyphenyl}propane.
19. (Original) The diepoxide of claim 7 where the diether is 3(2,3-epoxypropyl)-4-methoxyphenyl sulfone.
20. (New) The diepoxide ethers of claim 1 having the formula



where Ar is a trivalent aromatic radical of 6-20 carbon atoms and X is -R, -COR, -COOR, -SO<sub>2</sub>R, or -PORR' and R and R' are the same or different alkyl, alkylene aryl, aryl, arylene alkyl, alkylene alkoxy, alkylene aryloxy, arylene alkoxy and arylene aryloxy radical having from 6-20 carbon atoms.